Setup Android NDK

Download Android NDK

Follow instruction in https://developer.android.com/ndk/downloads/index.html to download Android NDK for your OS. The path for the downloaded NDK we denote as [NDK_dir].

Build NDK Program

1. Write a c program:

   hello.c

   ```c
   #include <stdio.h>

   int main(int argc, char **argv, char **env)
   {
       printf("Hello NDK!\n");
       return 0;
   }
   ```

2. Create Android.mk with following content:

   ```
   LOCAL_PATH := $(call my-dir)
   include $(CLEAR_VARS)
   LOCAL_MODULE := hello.out
   LOCAL_SRC_FILES := hello.c
   include $(BUILD_EXECUTABLE)
   ```

3. Create Application.mk with following content:

```
APP_ABI := armeabi
APP_PLATFORM := android-10
APP_STL := stlport_static
APP_BUILD_SCRIPT := Android.mk
```

4. Put hello.c, Android.mk, Application.mk into a same folder x.

5. Go to folder x.

6. Run command:

- Linux/Mac:

  export NDK_PROJECT_PATH=.

- Windows:

  set NDK_PROJECT_PATH=.

7. Run command:

- Linux/Mac:

  [NDK_dir]/ndk-build NDK_APPLICATION_MK=./Application.mk

- Windows:

  [NDK_dir]\ndk-build.cmd NDK_APPLICATION_MK=.\Application.mk

8. The executable will be generated at ./libs/armeabi/hello.out

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Run NDK Program

1. Push hello.out to the running emulator:

   a. Linux/Mac:

   [sdk_root_dir]/platform-tools/adb push [path]/hello.out /data/local/tmp/hello

   b. Windows:

   [sdk_root_dir]\platform-tools\adb.exe push [path]\hello.out /data/local/tmp/hello

2. Adb shell connect to emulator and navigate to /data/local/tmp folder.

3. Execute: ./hello

```
 fgwei@USF-Gold-Wifi-226-10-69 > ~/Library/Android/sdk/platform-tools > adb push ~/Work/test/h
ello/libs/armeabi/hello.out /data/local/tmp/hello
[100%] /data/local/tmp/hello
 fgwei@USF-Gold-Wifi-226-10-69 > ~/Library/Android/sdk/platform-tools > adb shell
# cd /data/local/tmp
# ./hello
Hello NDK!
#
```